

### ABSTRACT

An object tracking system is provided for tracking the removal of objects from a location and the replacement of the objects at the location. The system includes a radio frequency identification (RFID) tag attached to each of the objects to be tracked and each tag has an antenna. When activated, the RFID tag of an object transmits a unique code identifying the object. A storage unit is provided at the location and the storage unit has a plurality of receptacles configured to receive objects replaced at the location. Each receptacle has an associated antenna for activating the RFID tag of an object in the receptacle and receiving the radio frequency transmitted code of the object. The antennae of the system can be capacitive plates for conveying the radio frequency transmissions through capacitive coupling or inductive loops for conveying the transmissions through inductive coupling. A computer-based controller is coupled to the antenna of the receptacles for receiving transmitted codes and determining based thereon the absence or presence and location of objects within the storage unit.